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July 14, 2017

VIA ELECTRONIC MAIL

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Passaic, Hackensack, and Newark Bay
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U.S. Environmental Protection Agency
Region 2
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New York, NY 10007-1866

Ms. Jennifer LaPoma
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***Re: Lower Passaic River Study Area* - Upper 9-mile Plan**

Dear Mr. Sivak and Ms. LaPoma:

Thank you and your team for meeting with us on July 5, 2017. As we explained, given that the 17-mile Lower Passaic River Study Area ("LPRSA") Remedial Investigation/ Feasibility Study ("RI/FS") has been underway since 2004 and the Record of Decision ("ROD") has been issued for the lower 8-miles of the LPRSA, we believe that all parties share an interest in accelerating the completion of the study. However, at the current pace, the RI/FS will not be completed until 2021 at the earliest. Completing the RI/FS as quickly as possible will expedite the remedial design and remedial action for the upper 9 miles of the LPRSA, increase the likelihood of a successful overall remedy for the entire LPRSA, and support the economic development in the LPRSA watershed.

On a general level, the following was discussed at the July 5 meeting: (a) re-direct the FS to the remaining upper 9-miles of the LPRSA, as EPA has already issued a ROD for the lower 8-miles; (b) focus on a targeted remedial approach in the upper 9-mile FS, using adaptive management principles expressly endorsed by EPA's Contaminated Sediment Remediation Guidance (2005) and EPA Headquarters' January 9, 2017 memo to Regional Administrators on Remediating Contaminated Sediment Sites; and (c) accelerate the current schedule to complete the 17-mile RI by the end of 2017 and a Phase 1 FS for the upper 9-miles by the end of 2018. Consistent with EPA guidance and as applied at other Superfund sites, an adaptive management approach will identify specific key indicators (i.e., monitored parameters that are tied to the remedial action), select specific trigger criteria (i.e., concentrations and timeframes) of those key indicators that might trigger the need for additional action, and identify the specific actions based on attainment of trigger criteria. During our meeting, you also indicated that it may be possible to issue an interim ROD for the upper 9-miles that does not include preliminary remediation goals and allows a certain level of uncertainty at this time, subject to a later, final ROD (for ease of discussion, these are referenced as ROD 1 and ROD 2, respectively, in the enclosed submission). Additionally, it is recognized that

implicit with the goal of expediting this process, both parties must work towards streamlining the review and response on technical documents.

Region 2 expressed a willingness to consider our proposal and requested a more formal written submission of the proposal with additional detail. Accordingly, we are pleased to provide this submission for Region 2's consideration. We understand that Region 2 will review this submission and schedule a date to present it to management within approximately one week.

We look forward to hearing back from you on your discussions with management and hopefully having the opportunity to meet to discuss further details before summer vacations.

Very Truly Yours
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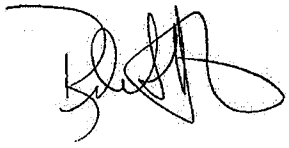


Robert Law, Ph.D.
CPG Project Coordinator

cc: Mr. Eric Wilson, Deputy Director for Enforcement, EPA Region 2
Ms. Sarah Flanagan, Branch Chief, NJ Superfund Branch, EPA Region 2
Frances Zizila, Esquire, Assistant Regional Counsel, EPA Region 2
William H. Hyatt, Jr., Esquire, CPG Coordinating Counsel

Attachment

Upper 9-mile Plan

I. 17-mile Remedial Investigation (RI) Report – July to December 2017[1],[2]

A. Complete the reach-by-reach analysis.

B. Calibrate the Chemical Fate and Transport (CFT) model for 2,3,7,8-TCDD and Tetra-PCB.

C. Revise RI Report Appendix J in response to Agency comments.

D. Complete mapping of Total PCBs and 2,3,7,8-TCDD in sediment. using conditional simulation.

E. Identify uncertainties (e.g., contaminant fate and transport, sediment stability etc.) that will be evaluated as part of the Performance Monitoring Program (see Section VI).

F. Submit Revised RI Report to EPA. (December 2017)

G. Working Assumptions

1. Final 17-mile BHHRA approved by EPA. (Summer 2017)

2. Final 17-mile BERA deferred - Agreement that key BERA issues (e.g., benthic medium impact SQT areas) are best addressed during Post ROD 1 Remedial Action and Performance Monitoring.

3. EPA will approve use of the calibrated model to evaluate FS remedial options.

4. EPA will approve RI Report in a timely manner.

H. Deferred RI Work

1. EPA-requested additional detail on fate and transport for RI Report Chapter 6

2. Modeling of the other 7 COPCs[3]

3. Resolving differences on the stability of sediments for which the bathymetric differencing shows no evidence of erosion

[1] Sections I and II would be performed pursuant to the May 2007 Administrative Order on Consent for completing the 17-mile RI/FS. The remaining sections are intended to describe how the RI/FS, Design and RA pieces would fit together and would be the subject of future order(s) between EPA and a new group of responsible parties.

[2] A proposed schedule for the RI/FS deliverables and flowchart/timeline for completing the RI/FS and the ROD 1 activities are included.

[3] The 7 additional COPCs for calibration are 12378-PeCDD, 23478-PeCDF, 1234678-HpCDF, PCB-126, PCB-167, DDX and Hg were proposed by the CPG in December 2016 and approved by EPA on March 19, 2017.

II. Upper 9-mile (ROD 1) Feasibility Study (FS) – 2017 to 2018

A. BASIS AND APPROACH

1. ROD 1 will actively remediate surface sediment between RM 8.3 to 12.3 that meet or exceed 300 ppt of 2,3,7,8-TCDD and/or 1ppm of Total PCBs.

2. These thresholds were developed to address sediments with inhibited recovery. They reflect the concept that inhibited recovery is indicated by sediment concentrations higher than levels on contemporary water column particulate matter that deposits on sediments. Chemical water column monitoring program data were used to set the thresholds.

3. Additionally, ROD 1 would actively remediate areas vulnerable to erosion in which sub-surface (0.5-1.5 ft) sediment concentrations of 2,3,7,8-TCDD and Total PCB are significantly higher than levels in the water column.

4. For the purpose of the FS, an estimate of likely targets was crafted from the results of conditional simulation mapping by delineating areas where surface sediment has at least a 50% probability of exceeding 300 ppt of 2,3,7,8-TCDD and/or 1ppm of Total PCBs. Approximately 53 acres were identified in this manner between RM 8.3 and 12.3 (see attached figure).

B. ROD 1 FS DELIVERABLES

1. TECHNICAL MEMORANDA

The following FS Technical Memoranda will be prepared and finalized. Collaboration meetings in advance of submittals and expedited review will facilitate progress and allow for an accelerated remedial action.

a) *RAO and Performance Monitoring Framework Technical Memorandum (September 2017). RAOs for ROD 1 would be discussed, and a general framework for baseline and long-term performance monitoring would be presented. Monitoring would include tissue, surface water, and sediment, with tissue and surface water data as the primary metrics for assessing remedy performance.*

b) *Remedial Technology Screening Technical Memorandum (September 2017). Remedial technologies potentially applicable to the ROD 1 remedy would be presented and screened.*

c) *Remedial Alternatives Technical Memorandum (Q4 2017). The set of alternatives to be evaluated in the ROD 1 FS and their technical bases would be documented.*

2. Draft ROD 1 FS - Q2 2018

a) *Includes evaluation of RM 10.9 Removal Action as a final action.*

b) *An adaptive management plan will be submitted as an appendix to FS and will include proposed performance metrics and potential thresholds for evaluating the need to undertake further action in ROD 2, if needed.*

3. Final ROD 1 FS - Q4 2018

C. RAOs AND PERFORMANCE MONITORING FRAMEWORK

1. RAOs for the ROD 1 remedy would be those Region 2 provided to the CPG on 7/3/17, with the suggested incorporation of the surface water RAO into the ecological RAO, as follows:

   a) *Human Health - Fish and Crab Consumption:* Reduce cancer risks and noncancer health hazards for people eating fish and crab by reducing the concentrations of COCs in the sediments and surface water of the Lower Passaic River.

   b) *Human Health - Direct Contact:* Reduce cancer risks and noncancer health hazards to people who come into direct contact with sediment by reducing concentrations of COCs in the sediments of the Lower Passaic River.

   c) *Ecological:* Reduce the risks to ecological receptors by reducing the concentrations of COCs in the sediments and surface water of the Lower Passaic River.

   d) *Contaminant Migration:* Reduce the migration of COC-contaminated sediments from the Lower Passaic River to Newark Bay and the New York-New Jersey Harbor Estuary.

2. Numeric PRGs would not be established for the ROD 1 remedy. Development of final numeric remedial goals would be deferred to ROD 2.

   a) ROD 1 remedy performance would be evaluated through baseline and long-term performance monitoring, comparing post-remedy recovery trajectories using the CFT and bioaccumulation models to pre-remedy baseline data. The ROD 1 remedy performance data would also be considered in developing final numeric goals/PRGs under ROD 2.

D. REMEDIAL TECHNOLOGY SCREENING

1. The remedial technology screening for the Upper 9-miles will be revised, in response to EPA's comments (previously provided) on the CPG's 2015 draft Remedial Alternatives Screening technical memorandum.

2. The revised technology screening will be submitted as a standalone technical memorandum. Remedial alternatives will be developed and documented in a separate technical memorandum (no alternatives screening to be performed, due to focused nature of this revised approach).

E. REMEDIAL ALTERNATIVES DEVELOPMENT

1. A limited set of remedial alternatives would be developed and evaluated for the ROD 1 remedy. At a minimum, the set of alternatives would include:

   a) No action upriver

   b) Targeted removal upriver

2. Remedial Action Levels (RALs) for 2,3,7,8-TCDD and Total PCBs will be 300 ppt for 2,3,7,8-TCDD and 1 ppm for Total PCBs and conditional simulation

mapping will be used to delineate the areas likely meeting or exceeding these thresholds.

3. The technical basis supporting the above RALs for 2,3,7,8-TCDD and total PCBs will be presented to Region 2 in a collaboration meeting and documented in the Remedial Alternatives Tech Memo.

F. REMEDIAL ALTERNATIVES EVALUATION

1. CFT and bioaccumulation model projections will be performed for the ROD 1 remedial alternatives.

2. Model projections of remedy benefit will be based on 2,3,7,8-TCDD and PCBs; other COCs will be evaluated based on initial SWAC reductions and/or correlations.

III. EPA to issue Proposed Plan/ROD 1/AOC - 2019

IV. ROD 1 Pre-Design Investigation and Remedial Design – 2020 to 2021

A. A pre-design investigation (PDI) would address the following:

1. Delineation of remedial area boundaries
2. Evaluation of the treatability of targeted sediments
3. Establishment of baseline contaminant levels in fish and the water column
4. Additional characterization of sediment stability

B. Investigation would include for RD and Baseline Conditions:

1. Bed mapping (bathymetry and side-scan sonar)
2. Sediment chemistry data
3. Water column monitoring
4. Fish tissue data

C. Remedial design would ideally be coordinated with lower 8-mile design to optimize treatment and disposal during the remedial action.

D. Finalize Expected Remedy Long-term Performance

1. Refine and finalize CFT and FWM using the data generated in the PDI and baseline investigations and the finalized remedy footprint.
2. Conduct projection runs.

E. Develop an Adaptive Management approach that is consistent with EPA's 2002 Sediment Principles memorandum, 2005 Sediment Guidance and 2017 OLEM memorandum and to serve as a key component of the ROD 1 RD/RA and would be utilized to confirm that the ROD 1 RA goals have been met. The Adaptive Management approach would develop a monitoring program that will focus on evaluating remedy performance against the expected performance and resolving the contaminant fate and transport and other uncertainties identified in the RI Report. This work would include:

1. Identifying specific key indicators (i.e., monitored parameters that are tied to documenting the performance of the remedial action in meeting RA goals and satisfying RAOs).
2. Selecting criteria values (i.e., concentrations and timeframes) that might trigger the need for additional action or further investigation, and
3. Specifying the possible specific actions that would be taken based on attainment or non-attainment of trigger criteria.

V. Remedial Action – 2022 to 2025

VI. Performance Monitoring Program (PMP) – 2025 to 2030

A. Objectives that may be identified and addressed within the scope of the PMP:

1. Progress Toward Attaining RAOs – Reduction and trends in tissue COC concentrations, benthic community, habitat recovery, contaminant flux reductions, etc.

2. Sediment Stability & Erosion – Evaluate areas with concentrations > RALs in the 0.5-1.5 ft layer, but not targeted because evidence suggests stability or improvement.

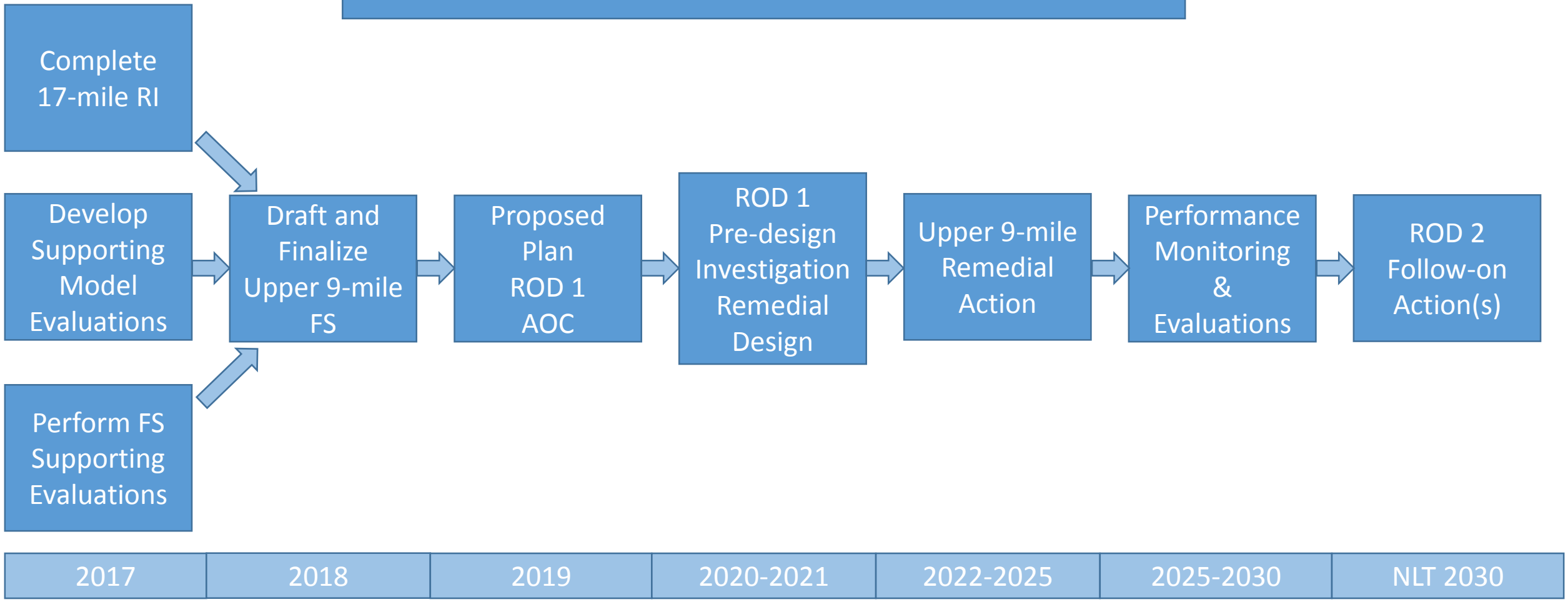
3. Uncertainties in the RI Report where site issues/questions were unresolvable at that time.

VII. ROD 2 Follow-on Actions – No Later Than 2030

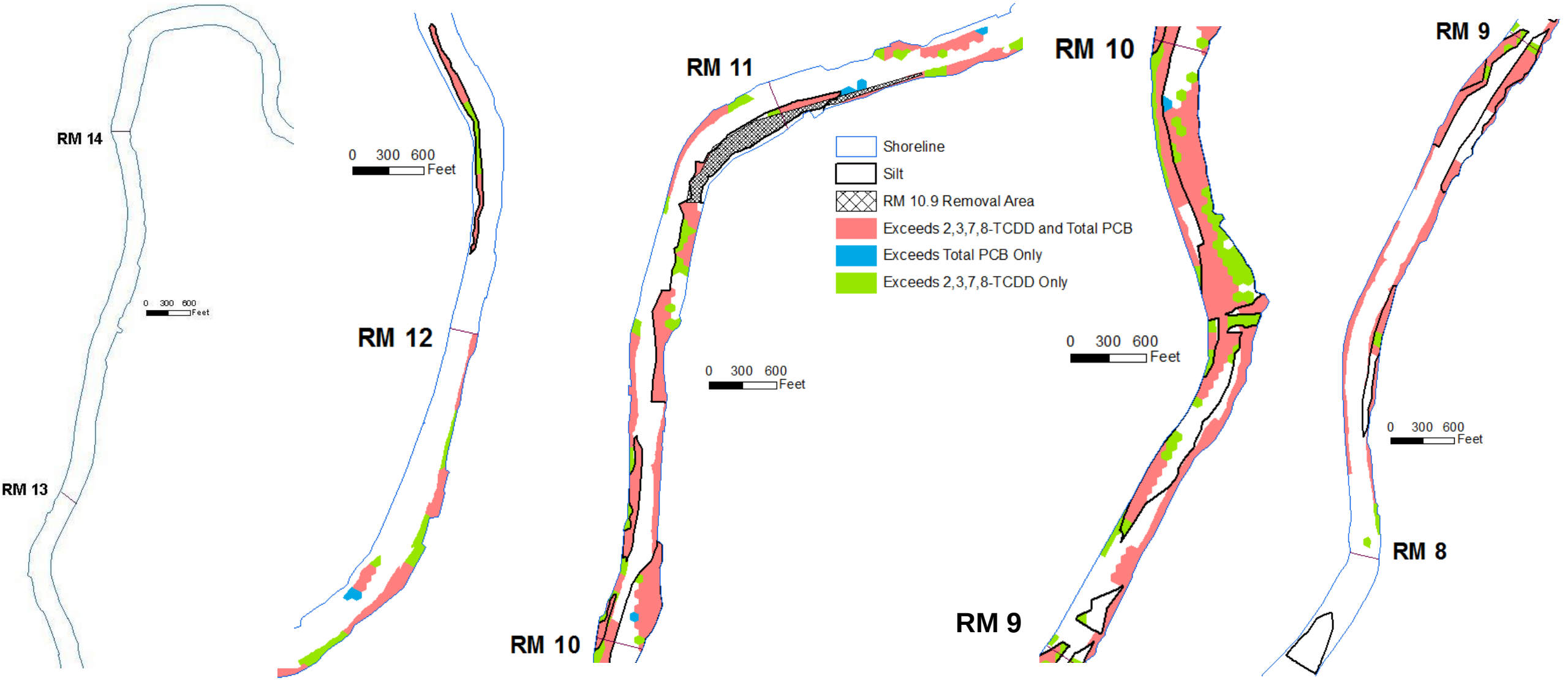
Upper 9-mile Plan – RI/FS Schedule

	2017						2018											
RI/FS Submittals to EPA	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
BHHRA	■																	
RI Report						■												
RAO Memo			■															
Technology Screening Memo			■															
Remedial Alternatives Memo				■														
Modeling Evaluations Complete											■							
Draft FS												■						
Final FS																		■

Upper 9-mile Plan – An Adaptive & Iterative Approach



Upper 9-miles: Areas to be Targeted



RM 8 = RM 8.3 in the RM system adopted for the FFS